1647

```
              RAW SEQUENCE LISTING              DATE: 06/01/2001
              PATENT APPLICATION:  US/09/331,930A    TIME: 15:52:05

              Input Set : A:\2297527.app
              Output Set: C:\CRF3\06012001\I331930A.raw

 3 <110> APPLICANT: ZIMMET, PAUL Z.
 4        COLLIER, GREGORY
 6 <120> TITLE OF INVENTION: A NOVEL GENE AND USES THEREFOR
 8 <130> FILE REFERENCE: 22975-20007.00
10 <140> CURRENT APPLICATION NUMBER: 09/331,930A
11 <141> CURRENT FILING DATE: 1999-06-30
13 <150> PRIOR APPLICATION NUMBER: PCT/AU98/00902
14 <151> PRIOR FILING DATE: 1998-10-30
16 <150> PRIOR APPLICATION NUMBER: AU PP0117/97
17 <151> PRIOR FILING DATE: 1997-10-31
19 <150> PRIOR APPLICATION NUMBER: AU PP0323/97
20 <151> PRIOR FILING DATE: 1997-11-11
22 <160> NUMBER OF SEQ ID NOS: 27
24 <170> SOFTWARE: PatentIn Ver. 2.1
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 342
28 <212> TYPE: DNA
29 <213> ORGANISM: Unknown Organism
31 <220> FEATURE:
32 <223> OTHER INFORMATION: Description of Unknown Organism: DNA sequence for
33        beacon from unknown organism
35 <220> FEATURE:
36 <221> NAME/KEY: CDS
37 <222> LOCATION: (29)..(247)
39 <400> SEQUENCE: 1
40 gttccaggag attacagctc cagccaca atg att gag gtg gtt tgc aac gac      52
41                                 Met Ile Glu Val Val Cys Asn Asp
42                                  1               5
44 cgt cta gga aag aaa gtc cgc gtt aag tgc aac acc gat gac acc atc    100
45 Arg Leu Gly Lys Lys Val Arg Val Lys Cys Asn Thr Asp Asp Thr Ile
46      10              15                  20
48 ggg gac ttg aag aaa ctg ata gcg gcc caa act ggc act cgt tgg aat   148
49 Gly Asp Leu Lys Lys Leu Ile Ala Ala Gln Thr Gly Thr Arg Trp Asn
50   25              30                  35                  40
52 aag atc gtt ctt aaa aag tgg tac acg att ttt aag gac cat gta tct   196
53 Lys Ile Val Leu Lys Lys Trp Tyr Thr Ile Phe Lys Asp His Val Ser
54                  45                  50                  55
56 ctg gga gat tat gaa atc cac gat ggg atg aac ctg gag ctt tat tac   244
57 Leu Gly Asp Tyr Glu Ile His Asp Gly Met Asn Leu Glu Leu Tyr Tyr
58              60                  65                  70
60 cag tagagggaa ttcctccacc ttgcccaacc ttgctttcct ctcccatggc        297
61 Gln
63 tcatttaaca ctgttgtaga tgctcatttt tttgttaagt gtact              342
66 <210> SEQ ID NO: 2
67 <211> LENGTH: 73
68 <212> TYPE: PRT
69 <213> ORGANISM: Unknown Organism
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71 <220> FEATURE:
72 <223> OTHER INFORMATION: Description of Unknown Organism: Amino acid
73        sequence for beacon from unknown organism
75 <400> SEQUENCE: 2
76 Met Ile Glu Val Val Cys Asn Asp Arg Leu Gly Lys Lys Val Arg Val
77  1               5                   10                  15
79 Lys Cys Asn Thr Asp Asp Thr Ile Gly Asp Leu Lys Lys Leu Ile Ala
80                 20                  25          `   30
82 Ala Gln Thr Gly Thr Arg Trp Asn Lys Ile Val Leu Lys Lys Trp Tyr
83             35                  40                  45
85 Thr Ile Phe Lys Asp His Val Ser Leu Gly Asp Tyr Glu Ile His Asp
86      50                  55                  60
88 Gly Met Asn Leu Glu Leu Tyr Tyr Gln
89  65                  70
93 <210> SEQ ID NO: 3
94 <211> LENGTH: 391
95 <212> TYPE: DNA
96 <213> ORGANISM: Unknown Organism
98 <220> FEATURE:
99 <223> OTHER INFORMATION: Description of Unknown Organism: Complimentary
100        sequence for SEQ ID NO: 1
102 <400> SEQUENCE: 3
103 atgttcaaca cagcagccat ccaaggtcct ctaatgtcga ggtcggtgtt actaactcca 60
104 ccaaacgttg ctggcagatc ctttctttca ggcgcaattc acgttgtggc tactgtggta 120
105 gccctgaac ttctttgact atcgccgggt ttgaccgtga gcaaccttat tctagcaaga 180
106 atttttcacc atgtgctaaa aattcctggt acatagagac cctctaatac tttaggtgct 240
107 accctacttg gacctcgaaa taatggtcat ctccccttaa ggaggtggaa cgggttggaa 300
108 cgaaaggaga gggtaccgag taaattgtga caacatctac gagtaaaaaa acaattcaca 360
109 tgaataaaaa ctttgatgct gcaaaaaaa a                                  391
112 <210> SEQ ID NO: 4
113 <211> LENGTH: 16
114 <212> TYPE: DNA
115 <213> ORGANISM: Artificial Sequence
117 <220> FEATURE:
118 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
120 <400> SEQUENCE: 4
121 aagctttttt tttttg                                                  16
124 <210> SEQ ID NO: 5
125 <211> LENGTH: 13
126 <212> TYPE: DNA
127 <213> ORGANISM: Artificial Sequence
129 <220> FEATURE:
130 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
132 <400> SEQUENCE: 5
133 aagcttcggg taa                                                     13
136 <210> SEQ ID NO: 6
137 <211> LENGTH: 20
138 <212> TYPE: DNA
139 <213> ORGANISM: Artificial Sequence
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141 <220> FEATURE:
142 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
144 <400> SEQUENCE: 6
145 agtccgcgtt aagtgcaaca                                          20
148 <210> SEQ ID NO: 7
149 <211> LENGTH: 20
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
156 <400> SEQUENCE: 7
157 ctccaggttc atcccatcgt                                          20
160 <210> SEQ ID NO: 8
161 <211> LENGTH: 20
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
168 <400> SEQUENCE: 8
169 ggctacagct tcaccaccac                                          20
172 <210> SEQ ID NO: 9
173 <211> LENGTH: 20
174 <212> TYPE: DNA
175 <213> ORGANISM: Artificial Sequence
177 <220> FEATURE:
178 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
180 <400> SEQUENCE: 9
181 gcttgctgat ccacatctgc                                          20
184 <210> SEQ ID NO: 10
185 <211> LENGTH: 30
186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial Sequence
189 <220> FEATURE:
190 <223> OTHER INFORMATION: Description of Artificial Sequence: Probe
192 <400> SEQUENCE: 10
193 tggtaataaa gctccaggtt catcccatcg                               30
196 <210> SEQ ID NO: 11
197 <211> LENGTH: 20
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
204 <400> SEQUENCE: 11
205 caaactggca ctcgttggaa                                          20
208 <210> SEQ ID NO: 12
209 <211> LENGTH: 19
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
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214 <223> OTHER INFORMATION: Description of Artificial Sequence: Primer
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217 gttgggcaag gtggaggaa                                            19
220 <210> SEQ ID NO: 13
221 <211> LENGTH: 102
222 <212> TYPE: DNA
223 <213> ORGANISM: Homo sapiens
225 <220> FEATURE:
226 <221> NAME/KEY: CDS
227 <222> LOCATION: (1)..(99)
229 <220> FEATURE:
230 <221> NAME/KEY: modified_base
231 <222> LOCATION: (44)
232 <223> OTHER INFORMATION: a, t, c or g
234 <400> SEQUENCE: 13
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W--> 235 atg atc gag gtt gtt tgc aac gac cgt ctg ggg aaa aag gtc cnc gtt   48
W--> 236 Met Ile Glu Val Val Cys Asn Asp Arg Leu Gly Lys Lys Val Xaa Val
```
237   1           5              10             15
239 aaa tgc aac acg gat gat acc atc ggg gac ctt aag aag ctg att gca    96
240 Lys Cys Asn Thr Asp Asp Thr Ile Gly Asp Leu Lys Lys Leu Ile Ala
241             20             25             30
243 gcc taa                                                        102
244 Ala
247 <210> SEQ ID NO: 14
248 <211> LENGTH: 33
249 <212> TYPE: PRT
250 <213> ORGANISM: Homo sapiens
252 <220> FEATURE:
253 <221> NAME/KEY: MOD_RES
254 <222> LOCATION: (15)
255 <223> OTHER INFORMATION: variable amino acid
257 <400> SEQUENCE: 14
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259   1           5              10             15
261 Lys Cys Asn Thr Asp Asp Thr Ile Gly Asp Leu Lys Lys Leu Ile Ala
262             20             25             30
264 Ala
268 <210> SEQ ID NO: 15
269 <211> LENGTH: 222
270 <212> TYPE: DNA
271 <213> ORGANISM: Psammomys obesus
273 <220> FEATURE:
274 <221> NAME/KEY: CDS
275 <222> LOCATION: (1)..(99)
277 <400> SEQUENCE: 15
278 aag atc gtt ctt aaa aag tgg tac acg att ttt aag gac cat gta tct    48
279 Lys Ile Val Leu Lys Lys Trp Tyr Thr Ile Phe Lys Asp His Val Ser
280   1           5              10             15
282 ctg gga gat tat gaa atc cac gat ggg atg aac ctg gag ctt tat tac    96
```

```
283 Leu Gly Asp Tyr Glu Ile His Asp Gly Met Asn Leu Glu Leu Tyr Tyr
284            20                25                30
286 cag'tagaggggaa ttcctccacc ttgcccaacc ttgctttcct ctcccatggc      149
287 Gln
289 tcatttaaca ctgttgtaga tgctcatttt taacaattca catgaataaa aactttgatg 209
291 ctgcaaaaaa aaa                                                    222
294 <210> SEQ ID NO: 16
295 <211> LENGTH: 33
296 <212> TYPE: PRT
297 <213> ORGANISM: Psammomys obesus
299 <400> SEQUENCE: 16
300 Lys Ile Val Leu Lys Lys Trp Tyr Thr Ile Phe Lys Asp His Val Ser
301   1             5                10                15
303 Leu Gly Asp Tyr Glu Ile His Asp Gly Met Asn Leu Glu Leu Tyr Tyr
304            20                25                30
306 Gln
310 <210> SEQ ID NO: 17
311 <211> LENGTH: 222
312 <212> TYPE: DNA
313 <213> ORGANISM: Psammomys obesus
315 <220> FEATURE:
316 <221> NAME/KEY: CDS
317 <222> LOCATION: (1)..(99)
319 <400> SEQUENCE: 17
320 aag atc gtt ctt aaa aag tgg tac acg att ttt aag gac cat gta tct   48
321 Lys Ile Val Leu Lys Lys Trp Tyr Thr Ile Phe Lys Asp His Val Ser
322   1             5                10                15
324 ctg gga gat tat gaa atc cac gat ggg atg aac ctg gag ctt tat tac   96
325 Leu Gly Asp Tyr Glu Ile His Asp Gly Met Asn Leu Glu Leu Tyr Tyr
326            20                25                30
328 cag'tagaggggaa ttcctccacc ttgcccaacc ttgctttcct ctcccatggc      149
329 Gln
331 tcatttaaca ctgttgtaga tgctcatttt taacaattca catgaataaa aactttgatg 209
333 ctgcaaaaaa aaa                                                    222
336 <210> SEQ ID NO: 18
337 <211> LENGTH: 33
338 <212> TYPE: PRT
339 <213> ORGANISM: Psammomys obesus
341 <400> SEQUENCE: 18
342 Lys Ile Val Leu Lys Lys Trp Tyr Thr Ile Phe Lys Asp His Val Ser
343   1             5                10                15
345 Leu Gly Asp Tyr Glu Ile His Asp Gly Met Asn Leu Glu Leu Tyr Tyr
346            20                25                30
348 Gln
352 <210> SEQ ID NO: 19
353 <211> LENGTH: 73
354 <212> TYPE: PRT
355 <213> ORGANISM: Unknown Organism
357 <220> FEATURE:
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VERIFICATION SUMMARY   DATE: 06/01/2001
PATENT APPLICATION: US/09/331,930A   TIME: 15:52:06

          Input Set : A:\2297527.app
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L:235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:236 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14